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Summary

This study explored health sciences learners' experiences of receiving feedback delivered through ePortfolios. Essentially qualitative, the research employed a collective case study approach to facilitate an in-depth, comparative perspective of the learners' experiences. Six focus groups drawn from the subject areas of radiography, physiotherapy and nursing enabled the researchers to access the learners' views and preferences regarding experiences of feedback in general, as well as feedback through an ePortfolio. Despite the small scale of this study, a rich picture of learner experiences, attitudes and preferences with regards to feedback and feedback through ePortfolios has been developed.

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1. Research question

What are health science learners' experiences of ePortfolios for formative and summative feedback?

2. Context of the research

Queen Margaret University (QMU) is a relatively small institution based in Edinburgh, Scotland, with a population of around 5,500 students – approximately 50% of whom are health sciences students. PebblePad was introduced as our institutional ePortfolio in 2005 and health science subject areas were among the early adopters. Many of our learners in health sciences use ePortfolio as part of their learning and development, and increasingly these students are required to use this tool as a vehicle for both formative and summative assessment. As progressively more subject areas within the institution are engaging with ePortfolios as part of their teaching and learning, it is essential that appropriate support can be provided in this area. However, it has not yet been established how students feel about receiving feedback through ePortfolio and so in order to understand the benefits and barriers that this approach presents and to be able to provide future support for our users, it was considered timely that research be undertaken regarding this question.

The study was funded by the Higher Education Academy Subject Centre for Health Sciences and Practice and data were collected and analysed over the period of a year. The aim of the study was to investigate whether, and in what ways, learners in health sciences engage with formative and summative feedback delivered through ePortfolios. Research questions included:

- What are the benefits for learners in engaging with feedback through ePortfolios?
- What are the barriers to learners engaging with feedback through ePortfolios?
- What do learners do with feedback received through ePortfolios?
- How do their experiences of using ePortfolios for feedback compare with their previous experiences of feedback?
- What are learners' preferences regarding ePortfolios for feedback, and why?

The objectives of the study were to:

- Build a rich picture of actual learner experiences of engagement with feedback through an ePortfolio;
- Develop an understanding of the impact of using an ePortfolio for feedback on the learning experience;
- Develop guidelines and case studies for educators to improve learner engagement with feedback.

3. Existing theory and research

Timely, detailed and appropriate feedback is extremely important for all learners (Hounsell, McCune, Hounsell and Litjens 2008). In addition to improving achievement in knowledge acquisition and skills development, feedback can also promote deep learning, improve motivation, increase reflective skills, and help learners prepare for future learning events (Nicol and MacFarlane-Dick 2006; Nicol and Milligan 2006). For health sciences students, who learn in challenging clinical settings, appropriate, timely and focused feedback on progress is essential; these learners regularly undertake activities in the clinical environment which are less structured and predictable than those in the academic setting, requiring a highly flexible response. ePortfolios have a range of tools which offer learners the potential to capture, collate and reflect on feedback, assisting them to develop, over time, a more informed sense of their skills and achievements as well as aiding progress towards their goal of becoming self-regulated professionals and independent life-long learners.

Feedback is reported to be a resource which is undervalued and underused by students (HEFCE 2007). However, research in this area to date has tended to be directed towards the tutors' role in the feedback process, for example, focusing on how tutors can improve the quality of feedback provided to learners. Little research has been undertaken regarding students attitudes to, and experiences of feedback (Higgins, Hartley and Skelton 2002; Mutch 2003; Weaver 2006; Carless 2006; Poulos and Mahoney 2008), particularly in relation to ePortfolios. If we are to support student-centred learning, this must be informed by an evidence base of research into student learning experiences.

4. Methodology

This was essentially a qualitative investigation; a collective case study approach considered three specific subject areas where ePortfolios had been integrated into the curriculum at QMU – BSc (Hons) Nursing (n32), MSc (pre-registration) Physiotherapy (n49), and BSc (Hons) Diagnostic Radiography (n72). By studying in-depth the use of ePortfolios for formative and summative feedback within three different health science subject areas it was hoped that a greater understanding of the context of use would be developed and that examples of different uses would be identified. It was also considered that this approach would enable our findings to be generalisable to a wider population, both within the institution and externally. Ethical approval for this study was gained from the institution.

Case studies – tutor questionnaire

Information regarding the three subject areas was collected from the tutors via a self-completion questionnaire, created using the form tool within PebblePad (see link: https://eportfolio.qmu.ac.uk/PebbleForm/answer.aspx?external=true&formid=168247). Questions were open-ended and gathered qualitative data regarding student cohorts, general use of and introduction to ePortfolio, assessment format, use of ePortfolio for providing feedback to learners, and tutors' views regarding use of ePortfolio. Data were

reviewed systematically by the researchers and assisted in providing a context for each of the case studies. A template for presenting information about the three case study areas was developed with some guidance from colleagues at the CRA and JISC.

Focus groups

A series of six focus groups were conducted over a period of five months, in order to gain access to the views, perceptions and attitudes of learners who had experienced using ePortfolios as a vehicle for receiving feedback. Groups consisted of naturally occurring cohorts of learners from the same level of subject areas (Kitzinger 1995) and were made up of between four and seven participants.

Information regarding these participants, such as student status, programme of study and preliminary views regarding use of ePortfolio to receive feedback, were collected prior to the start of each focus group session via self-completion forms, using open-ended questions (see Appendix 1). Data collected in this way were initially transcribed into a spreadsheet for each group to allow comparisons to be made within and across groups. Later, demographic data, such as age and gender, were drawn from these records and merged into a table which together with data from the tutor questionnaire helped to present an overview of each group (see Table 1). Data regarding previous experience of feedback were also presented in table form to assist analysis.

			Focus groups			
Focus group	*Number of participants*	*Age range*	*Programme of study*	*Year*	*ePortfolio tool(s) used*	*Type of feedback*
Pilot	3 [all female]	18 – 19 [mean = 18.3]	BSc Diagnostic radiography	1	Blog; Webfolio with Proformas for clinical activity	Formative
1	5 [4 F; 1 M]	22 – 39 [mean = 30.8]	BSc Diagnostic radiography	4	Blog; Webfolio with Proformas for clinical activity	Formative
2	3 [all male]	40 – 44 [mean = 42.6]	BSc Diagnostic radiography	2	Blog; Webfolio with Proformas for clinical activity	Formative
3	4 [3 F; 1 M]	26 – 32 [mean = 28.7]	BSc Diagnostic radiography	3	Blog; Webfolio with Proformas for clinical activity	Formative & summative
4	7 [4 F; 3 M]	26 – 37 [mean = 30.3]	MSc pre-reg physiotherapy	2	Webfolio	Formative
5	6 [all female]	22 – 29 [mean = 23.8]	BSc Nursing	4	Webfolio	Summative
6	6 [all female]	21 – 24 [mean = 22.5]	BSc Nursing	4	Webfolio	Summative

Table 1: Focus groups - overview

Focus group topics for exploration were developed and piloted (see Appendix 2). An invitation to participate in subject specific focus group sessions was extended to all students within the specified levels of the three subject areas. Incentives to participate were offered, in the form of a book token for a nominal sum and the provision of refreshments at each session. Focus group sessions were conducted on campus, facilitating easier access to participation for learners (Bloor, Frankland, Thomas and Robson 2001). As part of the focus group approach a series of exercises were conducted at the close of each session, in order to clarify understanding of topics (Kitzinger 1995), to rank specific aspects of receiving feedback through ePortfolio, and to facilitate comparison across groups, thereby aiding analysis (Bloor et al. 2001). This technique was found to be useful for encouraging deeper consideration amongst focus group participants. Responses to the ranking exercises were included with the transcription of the focus group recording and analysis of these data was merged with the overall findings.

Data from the pilot focus group were coded and analysed with the help of QSR NVivo8, a software tool for aiding qualitative analysis, and checked against the focus group topics to ensure that data appropriate to the research questions were being gathered. Data from the subsequent focus groups were analysed independently by the researchers using a systematic and iterative approach. This involved reading and re-reading the transcripts, assigning index codes relating to the topics discussed in each group, and later developing further codes and sub-categories to refine the focus. Throughout this process all transcribed views were considered, ensuring a rigorous approach and lessening any bias on the part of the researchers (Bloor et al. 2001).

5. Key findings

Studying cases where ePortfolios have been integrated into the curriculum enabled the project to demonstrate the background to use of ePortfolios for assessment and feedback within each of three health sciences subject areas at QMU. From our analysis it became apparent that there were, in some cases, significant differences between the case studies. These differences are still to be explored in the final stages of the project and will inform the development of exemplar case studies which will be disseminated via JISCinfoNet.

Learners' initial experiences of using ePortfolios for feedback were shown to be not dissimilar from their experiences with more traditional methods of feedback; however, it should be noted that this was a fairly small sample (n34).

- Typically learners' understanding and expectations of feedback concurred with emerging research in this area;
- Attitudes to using ePortfolio for receiving feedback were generally positive, with participants reporting that they found this approach to be quick and easy to access;

- One aspect considered particularly favourable was that feedback was provided together with the assignment in the ePortfolio, making it easier to see exactly what the feedback referred to.

Notable differences of opinion were observed within and across groups with regards to individual preferences and experiences. However, on the whole, these students identified feedback as being essential for their learning. Feedback was perceived to be particularly important because these students were preparing to enter a health profession and patient care was at the core of their learning. These learners perceived feedback to fulfil three main roles:

- A communication tool;
- A learning mechanism;
- An aid to personal and professional development.

Differences were observed regarding preferences for feedback delivery methods, with strong preferences being stated for both verbal and written feedback.

Experiences of feedback through ePortfolio

Means of engagement with feedback through ePortfolio echoed learners' experiences with traditional forms of feedback. However, a new method of engagement reported was the creation of a personal electronic dialogue between learner and tutor in response to feedback received.

Benefits in using ePortfolios for feedback were identified and these included:

- Ease of access;
- Ease of availability;
- Safety and ease of organisation;
- Feedback located with assignment – making future reference easier;
- Easier to read than handwritten feedback.

Potential barriers were also identified and these were found to relate to issues regarding computer anxiety, as well as issues relating to the ePortfolio system itself. In particular the issues of introducing a new technology as well as learning a new method to demonstrate learning were found to create obstacles which included:

- Tediousness due to too many options being available in the ePortfolio;
- Time-consuming – taking longer to create than on paper;
- Skills acquisition – time needed to learn how to use the system;
- Levels of support – in learning and using the system;
- Terminology – some of the ePortfolio terminology was not considered academic or professional enough (e.g. blog);
- Concerns over privacy – can a tutor view a blog that student has not shared?

Finally, specific barriers to receiving feedback in ePortfolio concerned the following;

- Learner preference for face-to-face discussion about feedback;
- Technical issues, such as:
    - Timing out – one participant reported having an issue with a reflective journal timing out during long periods of writing. This interrupted the student's flow of thought processes and had the potential to alienate the student to further use of the system.
    - Inability to find feedback;
    - Inability to view web links – one participant reported that their tutor had been unable to view web links attached to their reflective journal – this could be related to the fact that there are many options available within this particular ePortfolio system and people are not always aware of other options.

6. Implications for practice and future research

Feedback is a highly public affair reflecting to some extent the results of the National Student Survey and the response of the National Union of Students (NUS 2008). This study has sought to move beyond the results of such surveys to start to unpick the highly complex area of student experiences of feedback drawing upon peer-reviewed research. Coupled with the findings from our study, we have started to develop a rich picture of student experiences of feedback in the health sciences. The project has also used a wide range of sources to develop initial tutor guidance regarding feedback. The next stage is to use the findings of our study, including the rich picture, tutor guidelines and tutor comments, to extend the work of Nicol and MacFarlane-Dick (2006) and Hounsell et al. (2008) and develop a conceptual model for tutors using ePortfolios for feedback in the health sciences. Further work will also be undertaken to address some of the limitations of the research, such as conducting an analysis of the types of feedback provided by tutors in the study. Information about this study is available on our institutional web pages:
http://www.qmu.ac.uk/eportfolio/research.htm

7. References

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Appendices

Appendix 1 – Focus groups: collecting participant information

We would be grateful if you could complete the following details please:
(Any information you provide will be treated in strict confidentiality)

First name	
Matriculation number	
Date of birth	
Programme of study	
Please indicate student status while at QMU: UK European Union International	
Year of study	
Have you used an ePortfolio system before? *(please give details)*	
Do you engage with/ use feedback received through the ePortfolio?	
If so, in what ways do you make use of feedback?	
How does receiving feedback through the ePortfolio compare with other forms of feedback you have received?	
Contact email	

Appendix 2 – Focus group topics

Suggested topics to be covered

Starter/Ice breaker: Going round the room one at a time, ask participants to give first name and then tell us what they understand by the term 'feedback'.

1. **Is feedback important for you?**

Why? What type of feedback? Do you read feedback? What impact does feedback have on your studies (if any)? And on your future learning?

2. **Do you usually engage with feedback? / Do you usually make use of feedback?**

What kind of feedback? Expand … What do you do with the feedback? Why?

3. **What do you understand by the term 'assessment'**

Do you perceive any difference between assessment & feedback?

4. **Do you engage with feedback through ePortfolio?**

How/ In what way(s)? More than paper-based / other forms? Less than paper-based / other forms? About the same?

5. **How does your experience of using ePortfolios for feedback compare with your previous experience of receiving paper-based / other forms of feedback?**

Better? Worse? Same? Why? Explain…

6. **For you, what are the benefits of receiving feedback through ePortfolios?**

Access? Readability? Flexibility? Sharing? Other?

7. **Are there any barriers to you engaging with feedback through ePortfolios?**

Access? Usability? Formats? Other?

8. **What are you preferences regarding ePortfolios and feedback? Why?**

What would encourage you to engage more?